

From: Perrell SM (Susan) at Aera [SMPerrell@aeraenergy.com]
Sent: 1/6/2022 8:33:19 PM
To: Albright, David [Albright.David@epa.gov]
CC: Gentry BJ (Beau) at Aera [BJGentry@aeraenergy.com]; Anica Haynes [ahaynes@geosyntec.com]
Subject: RE: Hold the Date for: Meeting with US EPA Region 9

Hi David:

Here is our basic agenda:

- Recap Project Scope (only if need or desired, 10 minutes)
- Progress Update (5 minutes)
- Questions for EPA (35 Minutes)

Here are our questions (we are still editing a few of these). If we don't have time to cover all, we can hopefully schedule a follow-up meeting. Some of our folks were afraid we'd wear out our welcome with Region 9 if we had a 1.5 hour meeting!

Permitting Strategy

1. What is the right level of application technical detail: how are current applications (FOIA) stacking up to expectations?
2. Is two years reasonable to achieve injection approval under Class VI?
3. Why are permits taking longer?
4. What is worst case, best case, what key factors will affect schedule?
5. How can we avoid worst case and achieve best case?
6. Ultimately, we want to obtain Class VI, but Class II is a more familiar process.
7. What about a phased UIC project permit approach i.e., Class II and transfer to Class VI.
8. Would that ensure that Class VI permitting does not become the critical path to injection?

Permitting Scoping/Technical

1. Will EPA be amenable to having a meeting to review our draft project schedule later in Q1?
2. What elements should the AOR model include? (i.e., injectate, plume, pressure front)
3. How should geochemical and geomechanical data be used to inform the AOR model?
4. What characterization data (i.e., geochemical/geomechanical) would trigger a requirement for computational modeling?
5. Will EPA be amenable to reviewing the conceptual model, model selection, model conceptualization, parameters, boundary conditions, and path forward prior to model construction?
6. Is there a modeling software package (S) that EPA prefers or that would facilitate review? Is there a software packages that would make review more cumbersome?
7. Will there be a dedicated EPA AoR model reviewer who can discuss any issues with Aera and its consultant as they arise during the AoR model construction?
8. Surface CO2 Monitoring is discretionary for Class VI, will it be required under Subpart RR, for the 45 Q?
9. If injectate tracers or isotopes are used to track CO2, would a background CO2 study be required?
10. Can step rate tests (to determine frac pressure) be accepted w/out first submitting a testing plan for approval?
11. What is required in a QASP for pre-operational well testing? For monitoring? Where can we obtain QASP example/guidance?
12. Section 4.1 of the Well Construction Guidance: If well stimulation is planned, describe the stimulation fluids and procedures to ensure that stimulation will not fracture the confining zone, affect well integrity, or otherwise allow injection or formation fluids to endanger USDWs.
13. What is the relevant definition of well stimulation here?

14. Does all well stimulation need to be included in the Well Construction Plan and Notification or only well stimulation exceeding 90% of the frac pressure?
15. Can we continue to inject field produced water as well as CO2? Under what conditions? Would that activity (pressure, geomechanics, geochemistry need to be included in an AOR computational model?

Best,

Susan

Susan Perrell
Environmental Advisor - Carbon Management
Aera Energy LLC
714 743 4396 (mobile)
smperrill@aeraenergy.com

From: Albright, David <Albright.David@epa.gov>
Sent: Thursday, January 6, 2022 11:44 AM
To: Perrell SM (Susan) at Aera <SMPerrill@aeraenergy.com>
Subject: [External] RE: Hold the Date for: Meeting with US EPA Region 9

[Email sent from: Albright.David@epa.gov. Please use caution, this email originated outside of Aera Energy. Only click expected links or attachments.]

Hi Susan, just wondering if you have an agenda for our meeting this afternoon. Please send along if you do.
Thanks! David

David Albright
Manager, Groundwater Protection Section
USEPA Region 9 (WTR-4-2)
75 Hawthorne Street
San Francisco, CA 94105
415 972-3971

-----Original Appointment-----

From: Perrell SM (Susan) at Aera <SMPerrill@aeraenergy.com>
Sent: Tuesday, January 4, 2022 2:55 PM
To: Albright, David; Gentry BJ (Beau) at Aera; Ho, Yenhung; Dermer, Michele; Anica Haynes
Cc: Tsang PB (Patrick) at Aera; Roberts JA (Joe) at Aera; Patino AM (Andrea) at Aera; Reucassel GI (Garth) at Aera; Lipton SD (Scott) at Aera
Subject: Hold the Date for: Meeting with US EPA Region 9
When: Thursday, January 6, 2022 2:00 PM-3:00 PM (UTC-08:00) Pacific Time (US & Canada).
Where: Microsoft Teams Meeting

Since our initial meeting with Region 9 on August 17, Aera's Carbon Sequestration Team has studied EPA's (ten!) Class VI guidance documents, put together 79 internal Work Packages within EPA's 10-step Class VI Application outline, all with discreet objectives and deliverables to meet EPA's Class VI requirements. We have used those work descriptions to bring consultants on board to help us. We are about to register onto the Geologic Sequestration Data Tool, which we hope will further describe EPA's requirements for our application deliverables.

At this point, we now have several specific questions regarding permit application deliverables, especially around modeling. We also want to bounce off you some thoughts regarding a potential pathway from Class II to Class VI permit.

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